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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,614	07/15/2003	Akira Takagi	11-172	5364

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EXAMINER

CULBRETH, ERIC D

ART UNIT PAPER NUMBER

3616

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,614

Applicant(s)

TAKAGI ET AL.

Examiner

Eric Culbreth

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because it is not clear from the description at page 12, lines 9-16 and from the drawings how block S118 fits into Figure 2; it is recommended an entire block diagram be done for the embodiment with block S118. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because of the following informalities. Correction is required. See MPEP § 608.01(b).

- a. In numbered line 6 of the Abstract, "against" should apparently be "for" (the safety apparatus is not "against" the c[r]ash, but rather prevents injury in a crash).
- b. Numbered lines 14-16 of the Abstract contain an incomplete sentence.

3. The disclosure is objected to because of the following informalities. Appropriate correction is required.

- a. On page 1, line 8 "A" should be "a".
- b. On page 1, line 22 "mask" should apparently be "masks".
- c. On page 1, line 24 "directs" is idiomatic (i.e., it is not the proper use of the term in normal English at this instance).
- d. On page 3, line 17 a comma should follow "curve".
- e. On page 4, line 4; page 5, lines 4-5; and page 10, line 1 "assistant driver" is idiomatic.
- f. On page 4, line 12 "passenger is" is not clear.
- g. Page 5, lines 17-22 are an incomplete sentence.
- h. On page 6, line 5 the period after "processing" should not be spaced.
- i. Throughout page 8, it is not understood what is meant by "future processing region" (this is awkward terminology?).
- j. Page 8, lines 17-24 are an incomplete sentence.

- k. Page 9, lines 1-3 are an incomplete sentence (i.e., what “executes”?).
 - l. Regarding pages 8-9, it is not clear how “Modified embodiments” 1-3 are different embodiments, or specifically how embodiment 2 is accomplished.
 - m. On page 11, line 11 “sensor” should be “sensors”, “n” should be deleted, and “determines” should be “determine”.
 - n. Page 11, line 19 would not appear to be accurate (sensor 11 is in front of the seat, not at the rear in the drawings).
 - o. On page 11, line 28 “determines” should be “determine”.
 - p. On page 12, line 16 it is not clear what “I” represents.
 - q. Regarding page 12, lines 20-21 it is not clear how the head is protected when it is not in the future processing region.
 - r. Page 12, line 27 to page 13, line 1 is an incomplete sentence.
 - s. On page 13, line 6 “provides” should be “provided”.
 - t. On page 13, line 5, it is not clear what is meant by the “above mentioned range finder” (no ranger finder was mentioned above).
 - u. On page 13, line 6 “enlarges” should be “enlarging”.
4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no support in the specification for claims 10-11 and claim 12 (mathematical parameters).

Claim Objections

5. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n). This refers to claim

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Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 1, line 12 a comma should follow "outlines" for proper grammar.
- b. In claim 1, line 19, "pf" should be "of".
- c. In claim 3, line 1 "calim" should be "claim".
- d. In claim 8 and claim 9, "preferentially" is indefinite, failing to positively define structure (i.e., if it is "preferential", then is it required to meet the claim?).
- e. In claim 10, line 3 "whole of a" should be "a whole of a" for proper grammar.

- f. In claim 11, line 3 "whole of a" should be "a whole of a" for proper grammar.
- g. In claim 15, it is not accurate to the invention as disclosed to recite the imaging means as being at the rear of the seat (in the drawings it is at the front).
- h. In claim 16, line 2 "constructs a stereo" is idiomatic.
- i. In claim 17, line 2 "reducing" should be "reduces".
- j. In claim 17, line 4 there is no antecedent basis for "said range finder", as the range finder was first recited in claim 16 and claim 17 depends from claim 1.
- k. In claim 1, line 6 "the" should precede "passenger's".
- l. Claim 4 is unclear (passenger information is a kind of passenger?).
- m. In claim 1, line 1 it is inaccurate to recite the apparatus as against an automobile c[r]ash, as the device does not prevent a crash.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 4, 7-11 and 17 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by Niyogi et al (US006345110B1).

Niyogi et al discloses a safety apparatus against automobile clashes (i.e., it can alert the driver to hazards at column 3, lines 18-23) comprising an imaging (camera 20) picking up an image including a passenger on a seat (i.e., the driver). The apparatus then has extracting means extracting passenger information based on the head (CPU 10 and memory 30), and safety means protecting the driver against a crash at column 3 above. The extracting means stores references similar to head outlines, a part of which would be an ellipse (the center of Figure 2) and selects the image most similar to the elliptical person's head to output as information (claim 1). The reference image is limited to the face or ellipse (claim 2). As indefinitely recited in claim 4, the reference images represent kinds of passengers including the particular passenger sitting in the driver's seat. Regarding claims 7-11, the image of the passenger's head include the ellipse (claim 7), and in view of the recitation in claims 8-9 that only the region including the detected image is "preferentially" processed, Niyogi et al meets the limitation in that the limitation is not necessary (i.e., this "preferred", not required, so Nigoyi et al meets the positive limitations of the claims). Similarly, as there is no support for claims 10-11's recitations that an entire area is processed next iteration or continuously processed when no image is detected In the region, the positive limitations of the claims are met by Niyogi et al. In view of the lack of antecedent basis for a range finder in claim 17, Niyogi et al meets the positive limitation in claim 17 of another imaging means enlarging or reducing a picked up image in that the system includes a cropping window that can be adjusted with images with larger or smaller faces (column 4, lines 52-60).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 3, 5-6 and 12 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyogi et al in view of Farmer (US006662093B2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Niyogi et al to include an air bag as the safety means in view of Farmer's airbag controller and system 32, 36 in order to protect the occupant in the case of an impact (Farmer, column 1, lines 23-33) (claim 3). In the combination Farmer's extracting means determines the seat is vacant if no image is found to be approximate (column 6, lines 53-55, where the system determines that an occupant is

present, inferring that the system can also determine if an occupant is not present when there is an impact) (claim 5). Regarding claim 6, in the combination Farmer's camera 22 gets passenger information along a front-rear position in Figures 1-2, and regarding claim 12 Farmer in the combination does calculations (mathematical parameters) at column 4, lines 40-52 to determine the shape and position of the ellipse (i.e., in the at-risk area and the strength of the airbag, indicated by the shape of the ellipse).

13. Claims 13 and 15 as best understood are as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyogi et al in view of Breed et al (US006116639A).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Niyogi et al to include imaging means at the side and rear of the seat as taught by Breed's sensors 334 and 330 in Figure 9 as indefinitely recited in order to detect features of the occupant from alternative equivalent positions to sensor positions in other Figures of Breed et al.

14. Claim 16 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over Niyogi et al in view of Waslowski et al (US006781705B2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Niyogi et al to include a stereo range finder as taught by

Waslowski et al's system 11 in order to determine distance in view of Niyogi et al's desire at column 4, lines 53-60 to account for distance of the occupant from the system.

Allowable Subject Matter

15. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schildkraut et al (US006292574B1) teaches at column 4, lines 13-23 fitting a face to an ellipse.

Norton (US006292727B1) teaches a system that measures ovals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Culbreth
Primary Examiner
Art Unit 3616

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